

REMARKS

This paper is in response to the official action of July 13, 2005. Reconsideration is requested.

Claim Rejections - 35 USC § 112

The examiner pointed out that there is insufficient antecedent basis for the phrase “the over-etching” in Claim 1.

In order to overcome the rejection of claim 1, the applicant has changed “the over-etching” to --an over-etching--.

Claim Rejections - 35 USC § 103

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being patentable over Ishimaru (US 6,656,826) in view of Kantimahanti et al (US 5,757,369). Reconsideration is requested.

Claim 1 has been amended to add the step of forming the photoresist pattern.

Referring to amended claim 1 and Fig. 2f, the invention includes the step of forming a photoresist pattern 26 having at least one space between the metal line area and the metal fuse area.

In addition, according to the invention the metal line remains more thin than the metal line pattern at the space due to an etch loading effect, after the etching process of the metal layer. Therefore, the metal line pattern and the metal fuse plug are electrically connected to each other, even after the etching process of the metal layer. In addition, the underlying element 21, the metal line plug 24L, a metal line pattern 24F, the metal fuse pattern 25F, the metal fuse plug 24F and the semiconductor substrate 20 are electrically connected sequentially.

As a result, charges accumulated in the metal layer 25 during the etching process of the metal layer are discharged into the semiconductor substrate 21 through the metal fuse 245. Accordingly, the charges do not damage the underlying element 21.

The cited references do not teach or suggest a photoresist pattern having at least one space between the metal line area and the metal fuse area. Furthermore, the cited references do not teach or suggest that the metal line remains more thin than the metal line pattern at the space due to an etch loading effect, after the etching process of the metal layer.

Therefore, it is difficult to prevent charges from damaging the underlying element using Isimaru's method and Kantimahanti's method.

Accordingly, Applicant believes that the claim 1 is patentable over the cited references and other claims depending on the base claim 1 are also in condition for allowance.

Should the examiner wish to discuss the foregoing or any matter of form in an effort to advance this application toward allowance, he is urged to telephone the undersigned at the indicated number.

Respectfully submitted,

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